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KNOW YOUR MARKET

Teachers are merchandizers as well as educators. They process a product which must be marketed advantageously if they serve faithfully their students, their own profession and their institutions.

The successful producer must know the ultimate market for his product if he is to process it adequately and direct it into the most effective marketing channels. Following this concept there is a lot more to teaching than class room instruction, giving examinations and reporting grades.

Competent instructors not only know their subject matter and teaching methods but also keep abreast of the trends affecting the employment of the men who graduate from agricultural schools and colleges. In other words, these teachers keep closely in touch with the constant shifting among the opportunities for the placement of their students. Included, too, is the constant need for rubbing shoulders with potential consumers—the employers—and learning at first hand what type of training their prospective employers—our graduates—should receive.

The battle to maintain enrollments in agricultural curricula is on in earnest. As teachers we must resort to every worthy device in order to convince prospective students, potential employers, administrators and taxpayers that the products we send to market fully justify the time and money involved in their college training. Justification comes when our graduates demonstrate they are able to satisfy consumer demands.

* Published at Cookeville, Tenn., E. B., Knight, Tennessee Tech, Editor

THE PRESIDENT'S MESSAGE

By Ralph A. Benton
Southern Illinois University

In recent years both land grant agricultural colleges and non-land-grant colleges offering instruction in agriculture have generally reported a downward trend in enrollment in the divisions of agriculture. This is a matter of great concern.

Vocational agriculture in public schools has increasingly been a "feeder" of young men into agricultural colleges to the extent that in many colleges, schools, and departments today as high as 85% of all students enrolled in agriculture have had two or more years of vocational agriculture in high school.

There is evidence to substantiate the belief that many farm boys capable of doing college work are not enrolling in vocational agriculture in high school because of one or more reasons, and are thus being lost to an agricultural education at the college level as evidenced in decreasing college enrollments.

Vocational agriculture has played an important role in helping young men become established in farming. Much of the success in meeting the food and fiber needs of our rapidly growing population can be attributed to vocational agriculture. But, questions are being raised about the need for continuation of such an extensive program of preparation for farming in view of the reduced number of farming opportunities each year. Furthermore, questions are being raised about the adequacy of preparation for farming by a program that is terminal at the high school level, and about the adequacy of preparation for college if a student devotes much of his high school time to vocational agriculture.

With greater emphasis recently on education in science and mathematics in high school, many parents are asking college administrators and guidance counselors whether their sons should take vocational agriculture if they are planning to attend college. With these and other similar problems in mind a conference was planned last spring at Iowa State College and sponsored by the "Center for Agricultural Adjustment" in cooperation with the Kellogg Foundation for the purpose of taking an objective look at vocational agriculture in relation to the adjustments occuring in agriculture and in our society as a whole. Twenty persons were invited to this conference as contributors and consultants. They came from all sections of the United States and were either teacher trainers, directors of resident instruction, or supervisors of vocational agriculture.

Three panels were presented covering the general topics of (1) Should the objectives of vocational agriculture be changed to include training of students for agri-business occupations, (2) Is there a need for training in agriculture of secondary school students who do not expect to be farmers, and (3) Should vocational agriculture be treated as a terminal education program or as an intermediate stage in formal educational development?

Your President was privileged to be on one of the panels and can report that there were good arguments presented in favor of each of the above three premises. Although no general summary was attempted at this conference, it was made plain that there is a need to continue training in agriculture of high school students who do not expect to be farmers. Rather emphatically it was stated that the objectives of vocational agriculture should not be changed to include training of students in agriculture business occupations, but rather the objectives might be changed to include training of students about agriculture business occupations.

Although vocational agriculture was originally designed as terminal education for high school boys, an increasing number of vo-ag students are entering college. Several studies have been made which reveal that these young men with their background of vocational agriculture to-

gether with applied science and mathematics are doing well scholastically in college. There is no good reason not to continue in this direction.

The conference was in agreement that the area most neglected or poorly done was that of **guidance** of students on the part of the public school system and vocational agriculture teachers. If a school has a guidance counselor, he at best can impart only a limited amount of occupational information. Each high school teacher has an opportunity to teach about the occupations in his instructional field. If the vo-ag teacher is not aggressive in this matter he may lose a good student to some other area than agriculture. This may be a direct contributing factor to decreasing enrollments in college and university agricultural departments.

Although only a relatively small number of the members of **NACTA** are involved in vocational agriculture teacher education, yet all of us have a stake in this matter and have many contacts with active teachers of vocational agriculture. Could we not accept as a challenge the task of assisting these men in any way in their counselling program and in informing students concerning the many different opportunities, other than farming, that are available to the argriculturally trained person?

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A Vital Need--Agri-Business

By Roy Joe Stuckey, Wilmington College

A vast need exists to train a new type of agriculturalist to fill the twenty million jobs that are provided by the non-production sectors of agri-business. Much of the knowledge that this new type of agriculturalist will need has to do with human relations, and other broad concepts derived from the sciences and humanities.

Therefore, it would appear that the smaller colleges of this nation are uniquely equipped to meet this challenge by providing a broad general education supplemented with a basic agricultural education. Courses of study can be designed either to prepare the students for more technical graduate training, or they can be designed as terminal programs pointing towards immediate employment in such fields as agricultural supply, distribution, or processing. To accomplish these goals, the school with which the writer is associated offers two four-year programs. One in Agricultural Business (agri-business) and one in Agricultural Science (agri-science).

To be recognized as having successfully completed a program in agri-science, the student is required to complete, in addition to 26 semester hours of basic agriculture a major in Economics and Business. This can be combined with any other field of study giving each student an opportunity to tailor-make his education to his own particular needs and interest.

Our small school with its very strong program in liberal arts feels that its particular opportunity for service to agriculture lies in this direction. The challenge is tremendous but we have an abiding confidence that we, as well, as many other small colleges represented by **NACTA**, are as well equipped for the task as any other educational institution in America.

Our school offers only eight basic agriculture courses. These courses however, have been chosen with the utmost diligence in order that they may be a firm corner stone of vital information needed by almost anyone placed on any band of the total agriculture spectrum. These eight courses comprise 30 semester hours of credit. When one considers that these hours represent nearly one fourth of the total baccalaureate degree he may be inclined to agree with our conviction that this is a properly balanced program. It is, we feel, a program that will serve as a firm foundation to further training, formal or informal, once the student has definitely decided what his particular contribution to agriculture shall be.

Agri-Business, A Challenge to Agricultural Education

By Tillman Bubenzer *

Not too long ago farming was considered a way of life. Today it has become a business. Unfortunately not many farmers have recognized this fact. Since farming is a very pleasant way of life it is painful to change. Someone said, "Change is always painful but it is most painful to the person who does not want to change."

Since farming has become a business we are forced to deal with costs and profits. We have to recognize that production per man per day sets a person's living standard. The farmer has to learn to realize that instead of having a small volume with a large profit he must develop his enterprise into a large volume business with a comparative small profit per unit. Dean Butz of Purdue University predicted that the successful farmer in 1968 would have to show a $50,000.00 gross sale per man. This sounds almost fantastic when today in Kentucky 78% of the farmers sell less than $2,500.00 gross per year.

The biggest problem that the farmers face today when going into the business of farming is capital and business know-how. By business know-how I mean a knowledge of cost of production as well as marketing. No one can arrive at a sound decision in business unless he has information on his costs. The farmer has to learn that his investment should not be based on the cost of the product, the tool, or an animal; but it should rest on the decision of whether this investment will show a sound return, as well as a satisfactory interest on the investment.

I was privileged to make an extensive business trip through the South and found several establishments that handled 500 sows in a unit. This represents about 1,000 litters per year and approximately 8,000 hogs. Figuring this number of hogs @ $30.00 per head would be $240,000.00 sales. Most of those establishments were handled by four men. This would show a $60,000.00 gross per man. On another place I found 8,000 feeder cattle on feed with a capacity of 20,000 head in the feed lot space. If we consider 700 pounds beef produced per steer, this would make 5,600,000 pounds of beef produced per year. Figuring these cattle at 25¢ per pound would be $175,000.00 worth of beef per man if 8 men were handling this establishment, which I found to be correct.

Now let's come to agri-business. Agri-business includes any business connected with the production, processing or marketing of food. The opportunities for young people with farm background in this field are tremendous. Anyone who deals with the farmer, whether he sells to the farmer or sells for the farmer, has to know farming in order to be of real help to his customer. Here is a field for the farm boy or girl without land or money. The astounding fact today is that in this particular field there are greater potentials of continuous stable income than in actual agricultural production or farming.

To show you that this is true the National Sales Executive Inc., an organization of top business men, has published a little pamphlet entitled, "There is a Future in Your Farm Background". This booklet will explain to farm boys and farm girls the tremendous potential that exists in the field of buying for or selling to the farmer. With the many new technologies coming up in agriculture it becomes extremely important that the farmer understands these new methods and uses the technologies that have been developed by research. Just think of seed, fertilizer, feed machinery and processing. Picture the tremendous field in which it is absolutely essential to know and speak the farmer's language. Here is where farm boys and girls have opportunity to use their farm background as an asset and to help the farmer adapt himself to new technologies in producing what the market demands.

How will this affect agricultural education? It becomes immediately apparent

that to train the young people for agri-business instead of agriculture becomes a lot more difficult and also more challenging. Young people have to learn to work together. The time for them to learn this is during their education. If we keep in mind that farming has become a business, then an education in business as well as in agriculture becomes a MUST. The simple art of planting and harvesting or multiplying livestock has turned into a science requiring education and skill.

The increase in value per acre of land makes it imperative to increase the production per acre. This requires higher production costs and so with the opportunity of increasing profit per acre we also have increased potential loss per acre. Surpluses as we find them today are only temporary, particularly if we move into larger economical units where production per man per day sets the standard of living. Even in our own country in 1956 we had a population of 168,000,000. In 1975 we are looking forward to a population of 228,000,000. People of marrying age, between 18 and 24 years, are estimated this year at 16,000,000 and in 1975 at 22,000,000. Today we have 22,000,000 working women representing one-third of the total labor force.

Coming back to the production per man per day and his living standard, I draw your attention to the following chart which shows the change in income on a percentage basis between 1946 and 1956.

The Shift up the Income Ladder

1946		1956
4%	—over $75.00—	17%
6%	—5000—7500—	24%
8%	—4000—5000—	14%
17%	—3000—4000—	13%
25%	—2000—3000—	12%
23%	—1000—2000—	11%
17%	—under 1000—	9%

All this points up the fact that we are moving forward. If we understand progress in our economy as well as in farming we have great opportunities.

If we insist on old fashioned methods, we will be left behind. Instead of being discouraged in the agricultural field due to the fact that fewer people are employed in agriculture, we should look to agri-business and its potentials. Educate our young people to this opportunity and move forward with assurance and enthusiasm. We live in the future and not in the past. This also pertains to agriculture.

Let me close with a slogan that I found on a memorial coin of a city celebrating its 500 year anniversary. It says, "Noth- is lost unless you give it up."

*Manager of Conner Prairie Farms, Noblesville, Indiana

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Basic Science Requirements of Agricultural Colleges

By Thomas J. Stanly
Francis Nichols State College

Due to the emphasis now being placed on science in agricultural teaching, etc., State College agricultural teaching and practice and also because of frequent difficulty of agricultural students in science courses, a study of the basic science requirements and conditions of these requirements for different agricultural curricula is being undertaken by the NACTA.

The purpose of this study is to ascertain the degree of variation of the requirements of the basic science courses, including mathematics, chemistry and biological sciences, in the non-land grant colleges throughout the United States which offer degrees in agriculture. It is hoped that the information gathered from the study will provide us with ideas whereby we may arrive at those science requirements which will afford students in agriculture an effective and practical background.

Specific questions have been asked con-

cerning the type, amount, and time of the mathematics, chemistry and biological science requirements for the majority of the different agricultural curricula. Other major points of information requested have to do with the scheduling of these courses, the number of agricultural courses which the freshman student is permitted to take, and information concerning prerequisites.

Questionnaires were mailed to the fifty-six institutions offering degrees in agriculture listed in the National Association of College Teachers of Agriculture directory. To date, fifty-three replies have been received. This high percent of return, along with accompanying comments on the questionnaires, indicates a great deal of interest in this subject. The results of this study will be presented as one item on the program at the annual conference of the National Association of College Teachers of Agriculture which will be held at Southwest Missouri State College, Springfield, Missouri, on March 17, 18, and 19.

It would be very desirable if individual members of the National Association of College Teachers of Agriculture would give consideration beforehand to some obvious questions such as which and how much of each of these subjects should be required for agricultural students and any other questions pertaining to these science requirements.

Quite a difference of opinion has been found and a studied discussion of these opinions at our conference would be worth a great deal. If someone believes that the mathematics or other requirements should be strengthened, or if someone believes that they should be taken out all together or if anyone has an idea of a compromise between the two, they are urged to present their idea with reasons, when this subject is brought up for discussion in Springfield. Specific recommendations by the writer will not be made as a result of this study.

NACTA Executive Committee Meets

By W. C. Hyder
Secretary—Treasurer of NACTA

The Executive Committee of the NACTA met at Memphis, Tennessee on June 26-27, 1959. Its sessions were exceptionally well attended considering the distances the members had to travel. For the information of our members the highlights of this meeting are listed below.

1. The Annual Conference will again have a Thursday night session.

2. On Friday morning, March 17, the Judging Contest will be held.

Reasons will be given that afternoon and winners will be announced at the Friday night banquet. Professor Schowengerdt of Southeast Missouri State College will design a rotating trophy for the various contests sponsored by the NACTA.

3. There will not be a Junior Judging Contest next March. The Committee thought it best that the Contest be limited to one team per school per event. Three persons will comprise a team and only the three designated members will be scored for the trophy. Alternates may judge but must be designated as alternates before the beginning of the judging as their scores will not be counted in determining the winners.

4. The host school will not be eligible for the Contest but will help in caring for the several events.

5. If as many as five schools express a desire to enter a team for a Soils or Land Judging Contest this Contest will be held providing they notify President Benton far enough in advance so that he may so inform Dr. Glenn Karls of SW Missouri State College.

6. The Friday morning program will be divided as follows: (a) 8-10 A.M.—Group meetings based on subject matter interests; (b) 10-12 A.M.—Committee meetings.

7. The Executive Committee favored the compilation of a list of potential honorary members. To this end all active

members of the NACTA are requested to present in writing the names of prospective honorary members to President Benton at the start of the 1960 Conference.

8. All schools are urged to bring one or more student representatives to Springfield in March so that these men may work with National Advisor John Schatz in conducting the activities concerning the establishment of our honorary society, Delta Tau Alpha.

9. All members of the NACTA are urged to write letters to former members who were not in attendance at the Berea Conference and also others that should become members reminding them of our organization and inviting them to come to Springfield, Missouri, on March 16-18.

Initiating Undergraduate Research

By Burton W. DeVeau,
Ohio University

Many universities and departments of agriculture are attempting to encourage their better advanced undergraduate students to conduct research. In order to cite certain ways student research is initiated, three different methods by which advanced undergraduate students in agriculture at Ohio University are encouraged to perform research are described in the following paragraphs.

1. The Department of Agriculture has two research courses: Agricultural Problems and Research in Agriculture. Advanced students, with appropriate prerequisites, are encouraged to enroll in one of these courses. Individual projects are selected on the basis of the student's interest and hours credit to be received. Guidance is provided by an instructor and a formal written paper is expected. A recent, very outstanding research project to be completed was titled, "A Partial Survey of the Family Orchidaceae."

2. The University conducts an honors work program supervised by an Honors Work Committee appointed by the President of the University. This committee notifies the student during the second semester of his junior year if he is eligible to participate in the program. (The student has to have a B average). If the student is interested he consults with the department chairman and selects an adviser for his proposed program. Then, he confers with the chairman of the honors committee and submits his application. If the research project is accepted he registers for honors work during the first semester of his senior year. During this semester he performs extensive study in his chosen field of interest. He meets with his adviser on a conference basis at least once a week.

Near the end of the first semester he submits a brief report to the honors chairman describing his accomplishments during the semester. He is given a grade by the adviser. If the grade is below B or if he has not maintained a B average he is not permitted to enroll in honors work in his final semester.

During the final semester the student will complete his project and submit his formal report after it has been checked carefully by the advisor for scholarly quality, technical form and literary style. Each member of the honors committee will examine the report with the following criteria: Is the paper an original presentation? Is the paper a worth-while contribution? Does the writer show an adequate mastery of his field of investigation? The committee accepts, rejects, or requires certain improvements and changes to be made before acceptance.

The student is recognized for his work at an Honor's Day Convocation program. Further recognition is given on the Commencement Program and permanent records with the statement, "with honors in _____" following the students name.

Of 793 Ohio University graduates in June, 1959 only 4 students completed an honors project. The Agriculture Department was proud to have one of its students qualify. This student's study was,

"The Feeding and Breeding of Shetland Ponies as Applied to Their High Grade Production."

3. An additional opportunity for research is promoted by the local chapter or Delta Tau Alpha. The chapter conducts a public forum, open to everyone, every four weeks. The forum is led by a chapter member who discusses research in a specific area and leads the discussion concerning this research area. The first topic to be presented this fall was, "Bacterial Counts of Fresh Raw Milk."

The values derived from student research projects by the student and his adviser are unmeasurable. As a teaching technique student research projects have a very important role and could be utilized to great advantage. If guided properly they will contribute greatly towards the student's depth of learning and understanding.

NACTA Chatter

From LOUISIANA TECH comes word that Hal B. Barker, head of its Animal Industry Department has returned after a two year leave of absence. He completed his Ph.D. degree at Alabama Polytechnic Institute at the end of the summer term (1959). Earlier, Dr. Barker received his B.S. degree at Tennessee Tech and his M.S. at Iowa State College.

RICKS COLLEGE is having the unusual experience of being relocated at Idaho Falls which is 30 miles distant from its site at Rexburg, Idaho. The Agricultural staff has completed plans for buildings and equipment and is studying the matter of an ideal farm project. Professor George Patterson and his wife were recently blessed with their tenth child.

The OHIO UNIVERSITY farm is expanding its beef herd to a 100-110 cow herd of the Polled Hereford breed. Recent purchases were: BHF Real Domino 16 and FLF Larry Carlos, 26 the son of the famous WW Larry Carlos. General Education courses in agriculture are attracting an increasing number of students.

J. R. Wells of FORT HAYS STATE COLLEGE at Hays, Kansas reports that a steer feeding project is arousing much interest among his students. Twelve seniors are feeding four pens of steers upon which they are keeping records and making estimates of feed needed, expected daily gains and estimated selling price. The class will follow these steers to market to observe marketing procedures.

John Beeks has joined the Agriculture teaching staff at NORTHWEST MISSOURI STATE COLLEGE. He holds the M.A. Degree from the University of Missouri and is in charge of Agronomy and Farm Mechanics classes. The NW Missouri College Ag Club will hold its annual livestock judging tour on December 5. Three divisions will be provided for FFA, 4-H and college participants. F. B. Houghton is the faculty advisor for this active group.

EARLHAM COLLEGE has discontinued its agricultural science courses according to our good friend and valuable member, Raymond S. Trayer. He is presently employed by the Chore-Boy Manufacturing Company of Cambridge City, Indiana as an agricultural consultant and sends his regards to his friends in the NACTA.

The Tech Aggies of TENNESSEE TECH won second place in the student club float section of the recent Homecoming parade. This organization is composed of students majoring in any phase of agriculture. Three departmental clubs are now available to men majoring in Animal Industry, Agronomy or Agricultural Science.

WESTERN ILLINOIS UNIVERSITY is reorganizing its agricultural curricula in company with other divisions of the institution. The evaluation study includes course offerings, credit values and other relationships. Professor Leslie J. Van Etten, assistant professor of Horticulture, will be on leave during January and February, 1960. He plans to tour the Horticultural Departments of a number of Southern and Western universities and will

appreciate learning of any short courses or meetings scheduled for those areas. Incidentally, Western Illinois University sponsored a Summer Conference concerning which we hope to hear more at a later date.

A new 24 unit "porkorium" has been given to WILMINGTON COLLEGE by the Chore-Boy Manufacturing Company of Cambridge City, Indiana. The Wilmington College agricultural department conducted its annual fall field trip in early October for members of the Agricultural Club. Numerous places of professional interest were visited in Illinois, Iowa and Indiana.

Our good President, Ralph A. Benton, despite a busy Fall schedule at SOUTHERN ILLINOIS UNIVERSITY, found time recently to fill two speaking engagements before important professional groups. He addressed the Agriculture Teachers Section of the Illinois Teachers Association for Southern Illinois on October 30 and a week later appeared on the St. Louis program of the Agriculture Teacher's section of the Missouri State Teachers Association.

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ACCREDITING AS A FUNCTION OF NACTA

Almost from the birth of our organization, various members have expressed the desire that we develop a set of academic criteria which can be applied as a standard of excellence among our different schools.

We, as administrators of departments of agriculture in many small colleges, have great faith in our own departments, in our course offerings and in our ability to meet the objectives for which we are striving. However, all too often we find that the general public, mostly because of lack of correct information, needs some sort of identifying stamp of approval to elicit its faith in our endeavor.

In Unity There is Strength. Our organization consisting of teachers from a great number of educational institutions certainly has the right to set up certain criteria and goals of academic attainment to which its members can aspire. It, also, has the right to signify that these goals have been successfully accomplished. Great good can come from a positive emphasis whereby recognition is given those schools which have met certain preannounced standards of excellence of performance. Such a program will aid member schools in evaluating each others credits, it will give them prestige in the eyes of their agricultural constituency, and it will cause them to strive for even higher standards of academic attainment.

Even though such a need has been felt since the inception of our organization, we have not yet been able to meet it because of the press of organizational matters. Therefore, at the 1959 annual meeting of our association, held at Berea Ky., our newly elected president, Dr. Ralph Benton, charged the "Improvement of College Teaching" committee with the task of formulating a proposal for setting up a crediting function under the auspices of NACTA.

At present time members of this committee and officers of the association are being asked to formulate their ideas and proposals for this project. Expressions from the general membership are also eagerly sought and will be thoroughly considered by the committee as it develops its recommendations. Please send your suggestions to the committee chairman, Professor Roy Joe Stuckey, Director of Agriculture, Wilmington College, Wilmington, Ohio.

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DELTA TAU ALPHA NOTES

As reported elsewhere the Executive Committee has requested Dr. Glenn Karls, chairman of the Program Committee, to make arrangement for the sessions of our newly organized honor society, Delta Tau Alpha, during the 1960 NACTA Conference at Springfield, Missouri. Professor John Schatz, of Southwest Missouri State College, the national advisor of Delta Tau Alpha, will be in charge of its annual convention.

We hear reports that a number of our member schools have organized or are in the process of organizing local chapters and will be represented at Springfield. The group at Ohio University is already functioning smoothly and has raised sufficient funds through the sale of pansy and tomato plants last spring to pay the expenses of two delegates. They plan to repeat this project next spring and will expand their list of varieties.

The Editor of the NACTA Journal will be glad to publish news of the several chapters and calls attention to chapter reporters that the Journal will again go to press by February 1, 1960.

Howard D. Corbus
1890-1959

Howard D. Corbus, one of our most valued NACTA members, passed away unexpectedly in July at his home in Kalamazoo, Michigan. Death was due to a heart condition.

Professor Corbus was head of the Agricultural Department at Western Michigan University where he had been a prominent faculty member since 1927. He was a graduate of Michigan State College and had received his MS degree from Cornell University. Mrs. Corbus, a son and three daughters survive him.

During his long and constructive career Mr. Corbus had at various times taught agriculture in Michigan high schools, served as a high school principal and also as a county agent. An early member of the NACTA, he proved to be a tireless worker in all of its activities and contributed frequently to its Journal. Evidencing the respect with which he was held by members of the NACTA was his period of service as its director from the Central region and assignment to many key committees.

Wesley W. Hoy
1897-1959

Wesley W. Hoy, a charter member of the NACTA, died suddenly from a heart attack in early September. Thus passes another of the men who helped establish the NACTA and kept the torch burning.

Mr. Hoy was a widely known member of the Agricultural staff at Southwest Missouri State College where he had taught for 12 years. He held the BS, BA and MS degrees from the University of Missouri. Mrs. Hoy, a son and three daughters survive him.

Widely recognized throughout Missouri for his ability as an instructor and for his deep interest in rural young men, Mr. Hoy will be long remembered in the Ozark area. His many friends in the NACTA valued his wise counsel, his sense of humor and his sincere interest in that organization.

See You in Springfield, March 1960

Student Research Projects

One of the most important responsibilities of the teacher is to help students clarify their values and to teach students how to think critically more effectively. A technique which may be used to accomplish this responsibility, particularly with the more gifted student, is the utilization of student research projects. In a survey of research project participation by NACTA members conducted by the author in 1958, it was found that 40 per cent of the respondents indicated that students participated in or conducted research projects. These projects were largely in the form of special problems. A few involved assisting in a technical project.

The purpose of student research is to provide an opportunity for the able student to achieve a greater depth in learning than is possible in an ordinary classroom situation. Providing an opportunity for a student to achieve a greater depth of learning is vital to teaching students how to think critically more effectively and in developing versatile minds capable of dealing with social, economic and political problems of our era.

There are many values of student research projects. Such participation provides an opportunity for the imaginative student to test his ability. It helps develop a creative mind. It also creates an interest and a desire in the student to continue his formal education beyond the baccalaureate degree. Student research also provides an opportunity for the faculty research adviser to participate in research projects he may be unable to conduct by himself due to his academic load or administrative policy. The procedures and results of certain student research projects may be used in the classroom situation to support or supplement a principle being taught. These values, among others, should encourage teachers of agriculture to assist and promote student research projects in their fields.

There are many types of research projects in which a student may participate. Short-time production projects as fertilization rates of crops, livestock feeding projects, nutrition and light intensity experiments in the greenhouse, and production testing programs provide many varied research opportunities which could be conducted successfully by students with an appropriate amount of guidance. Projects involving historical reviews, surveys of practices, reviews of literature or compilations of existing research would prove to be of considerable value to the student and may be of importance to the adviser involved. Seemingly, there is no area of research in which a student with a keen mind and with appropriate guidance could not make some contribution.

Teaching With Research

By Burton W. DeVeau,
Ohio University

The function of a research advisor of a national organization to encourage and promote research by its members seems to be a difficult task to accomplish. This difficulty is infinitely magnified when the individual members represent many different fields. It is further complicated when the members represent institutions of higher learning that vary in their requirements and restrictions involving faculty participation in research projects. Such a situation is evident in the NACTA. Nevertheless, there are several recommendations involving research which should be considered at this time.

Agriculture, in general, has a myriad of research projects initiated and conducted by professional, educational, governmental,

private and commercial organizations. These projects often are duplicates or are conducted under similar circumstances without cooperative effort. As a result many published reports are placed on the educational market. The reports are so numerous that the teacher will often overlook the research completed in his field or he may turn to a secondary source which will give him a summary and an interpretation of the completed research. This may become a habit and he may rely too much on the secondary sources rather than examining the research report itself. Such reliance may lead to misinterpretations and inappropriate adaptations. This situation indicates that steps must be taken to evaluate the present status of research in all fields of agriculture. The immediate step is to prepare comprehensive surveys of the research findings in these fields. This is a project which could be undertaken by members of the NACTA.

Upon completion of a comprehensive survey it would then become the responsibility of each teacher to ask of himself the following questions of research in his field. 1. What has research really uncovered? 2. What research basis is there for the basic principles I adhere to in my field?

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Springfield, Missouri, and The Ozarks---March 1960

The city of Springfield, Missouri—home of Southwest Missouri State College, which hosts our 1960 convention in March—offers unlimited recreational facilities.

Borrowing a phrase from a recent popular song, the city of 105,000 is located "smack-dab in the middle" of Missouri's fabulous resort area. To the north some 70 miles is the Lake of the Ozarks. To the south and southeast are Table Rock Lake, Lake Taneycomo, Bull Shoals Lake, and Lake Norfork.

Lake of the Ozarks is one of the largest lakes in the nation, and snakes for miles through the northern Ozark's hills. Located on Highway 54 between Eldon and Camdenton, it is easily accessible.

The chain of lakes on White River, consisting of Table Rock, Taneycomo, and Bull Shoals, are favorites of folks in the general Springfield area and the Ozarks. The multi-million dollar Table Rock project is now nearing completion. This gigantic dam is situated ten miles west of Branson about 55 miles from Springfield, and is worth a look-see. It is "smack dab in the middle" of the Shepherd of the Hills country, so named because it is the site of Harold Bell Wright's famous book. The Shepherd of the Hills country is a year-around tourist attraction.

Lake Taneycomo is a great lure for trout fishermen. It "starts in" where Table Rock "leaves off" and flows past Branson to Powersite Dam near Forsyth. Then Bull Shoals Lake "starts in" where Taneycomo "leaves off." Bull Shoals abounds in lunker bass fishing, and is perhaps as productive as any bass lake in the nation.

The chain-of-lakes area is without peer scenery-wise. The knobby hills and deep gorges of the Ozark mountains are at their best in this area. The winding drive from Springfield to any lake site is a "must." Hard surfaced roads lead to all of the lakes.

Springfield itself is a fine tourist attraction. Three lakes are located with 15 miles of the city limits—McDaniel Lake, Fellows Lake and New Lake Springfield. There are presently four golf courses, with another in the offing. Also there are fine bowling alleys, theaters, spacious shopping centers, fine homes, and the Ozark Jubilee.

Affirms Dr. Glenn E. Karls, head of the SMS agriculture department, "You name it and Springfield has it."

One thing certain, it will have our 1960 convention in March.

(Don Payton, SMS Publicity Director)

SIXTH ANNUAL CONFERENCE
NATIONAL ASSOCIATION OF COLLEGE TEACHERS OF AGRICULTURE
MARCH 17, 18, 19, 1960

Southwest Missouri State College, Springfield, Missouri

THURSDAY, MARCH 17
Student Center Building

4:00 P.M. Executive Committee Meeting ..... Room 101
5:00 to 6:30 College Cafeteria Serving Hours
6:00 to 7:30 Registration ..... Grand Lounge Hallway
7:30 First General Session ..... Dr. G. E. Karls, Chairman, SW. Missouri State College
Invocation ..... Rev. C. E. Atkins, President, Council of Churches
Welcome ..... Dr. Roy Ellis, President, SW. Missouri State College
Greeting ..... Dr. David Scott, Mayor, Springfield, Missouri
Introductions ..... Dr. Karls
Moments of Memory ..... Dr. E. B. Knight, Editor, NACTA Journal
President's Address ..... Dr. Ralph Benton, Southern Illinois University
8:30 Mixer ..... Grand Lounge
9:00 Judging Teams Meeting ..... Mr. Stanlie Spangler
9:00 Meeting of Honorary Society ..... Mr. John D. Schatz
9:00 Committee Meetings ..... Agriculture Building

FRIDAY MORNING, MARCH 18
Agriculture Building

7:00 Breakfast ..... Student Center, Room 201
(Courtesy MFA Milling Company)
8:00 to 12:00 Judging Contests ..... Buses provided
8:15 to 9:45 Subject Matter Groups ..... Rooms announced
9:45 Production Area Trends ..... Dr. E. R. Kiehl, University of Missouri
10:45 Campus Tour .... Mr. Don Payton, Publications Director, SW. Missouri State College

FRIDAY AFTERNOON, MARCH 18
Room 200 Agriculture Building

1:00 Kraft Food Company Tour ..... Buses provided
3:00 Basic Science Requirements ..... Mr. T. J. Stanly, Nicholls State College
4:00 A Set of Basic Standards ..... Mr. Roy J. Stuckey, Wilmington College
6:30 Annual Banquet ..... College Cafeteria
Entertainment
Contest Awards
Address ..... Mr. Jean Paul Bradshaw, Springfield, Missouri

SATURDAY MORNING, MARCH 19
Room 200 Agriculture Building

8:00 The Future for Agriculture Graduates ..... Mr. D. Howard Doane, Doane Agricultural Service, St. Louis
8:45 Questions and Answers .....
9:30 Recess .....
9:45 General Business Session ..... Dr. Ralph Benton, President, NACTA
11:00 Meeting of New Committees .....
12:00 Adjournment .....

LADIES' PROGRAM

THURSDAY EVENING, MARCH 17

7:30 First General Session ..... Ballroom, Student Center
8:30 Mixer ..... Grand Lounge, Student Center

FRIDAY, MARCH 18

9:30 Tour of Campus ..... Meet in Agricultural Building
11:00 Brunch ..... Home of Mrs. G. E. Karls
1:00 Tour of City ..... Starting at Karls Home
6:30 Annual Banquet ..... College Cafeteria

Journal of the National Association of College Teachers of Agriculture

Volume III | February 1960 | Number 3*

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EDITORIAL

REDUCING STUDENT MORTALITY

Each September a host of freshman students reach the college campus full of hope, ambition and energy. Back home their parents and former teachers, too, are hopeful and happy to see these young folks have the opportunity to attend college and prepare themselves for service to mankind. Then comes the first term of classes with its all too high a percentage of drop outs and failures. High hopes are dashed, ambitions thwarted and the number of freshmen shrinks like a bank of snow in warm sunshine.

We in agriculture talk authoritatively about conservation of the soil and forests. Scientific methods are devised and put effectively into practice. Land is saved and brought back into production; trees are planted and moisture conserved through dams and pond construction. Other provisions are made for the welfare of future generations. Yet, we do very little to conserve a considerable portion of one of our most important resources—these young people who attempt college only to fall by the wayside.

Looking back over many years of experience we wonder what we might have done as a college teacher to reduce the number of these drop outs and thus conserve some of this wasted time, energy and money. As we ponder the question we wonder whether somehow we might not have found more time early in the freshman year to have chatted informally with these newcomers and encouraged them to discuss their problems. Perhaps a kindly word, a bit of suggestion or a few hints on study procedures would have made the difference between a reasonably good record and failure.

Admittedly, it is difficult to find time to do all the things a good teacher is supposed to do. Maybe we are giving too much time to routine matters and not enough to "student conservation". Let us remember that many beginning students have the capacity to earn a degree but become discouraged right at the start of their college days and disappear from the campus, never to return. Potentially able to produce at a higher level, they are doomed to mediocrity because somewhere, somehow they did not receive a helping hand.

* Published at Cookeville, Tenn., E. B., Knight, Tennessee Tech, Editor

THE PRESIDENT'S MESSAGE

Ralph A. Benton,
Southern Illinois University

With the mid-point of the 1959-60 school year reached, it might just be worthwhile to check on how well our students, particularly freshmen, have been doing.

Competition for a chance to be in college is keen in many institutions and in the face of the rising flood of high school graduates wanting to go to college, and due to lack of facilities, many colleges and universities are being more selective in admission policies. Higher scholastic achievements must be attained by high school students if they hope to be admitted to any college. Many private schools now accept only those high school graduates who are in the top quartile of their class.

Most state colleges and universities, supported by tax money, with generally more liberal admission policies, are tightening their policies in an effort to stem the flood and curtail the deplorably high rate of failures and drop-outs in the freshman year. Many are requiring the entering freshmen to be in the upper 50% of their graduating class. Some institutions of higher learning admit only by examination. Still others will admit the lower ranking student to enter on probation for a quarter or semester. In order to remain in school the student must do at least "C" work.

This acute situation is brought more sharply into focus when we consider the results of a new national study which shows that 75% **of the parents** in any given area expect their children (now below college age) to go to college. The problem appears to be, "How to squeeze 75% of the youngsters into the top 25% of their classes".

Other studies confirm the old idea that the best bet for outstanding scholastic success in college is the student who achieved impressive scholastic success in high school. The scholastic performance of a student during his first quarter or semester in college seems to be a very reliable indicator of his future scholastic performance.

A prominent mid-western university reports the following information from a study by its Junior Division:

1. **Only two** out of more than 100 sophomores who came from the bottom scholastic quarter of their high school class were doing average or better scholastic work.

2. **All** of the tip-top scholars at the end of the sophomore year came from the top quarter of their high school classes.

3. More than eight out of ten (from a field of almost 500) high school top quarter students were doing average or better scholastic work.

4. **Only one** of 10 of the original bottom-quarter group was still in school and doing **satisfactory** scholastic work at the end of the sophomore year.

One staff member observed after seeing the study: "We don't seem to be doing any better at mining gold from student ore than the high school teachers did.'

The Versatile "35"

By John T. Carter,
University of Houston

Better teaching is the goal of every conscientious teacher. Regardless of the grade level of instruction, every person who is interested in raising his quality of teaching is constantly on the look-out for methods, techniques or equipment which would enhance his classroom effectiveness.

Many times a teacher will learn of some particular teaching aid that is a

total stranger, but quite frequently the "new" aid is just an old acquaintance whose whole potential has just become recognized. Into this latter category falls the 35mm camera.

Most everyone that owns any type of camera—regardless of make, age, or price, has at least a nodding acquaintance with the 35mm. During the past few years this style of camera has come a long way in price reduction and ease of operation. In addition, there has also been an improvement in the quality of the cameras as well as in the accompanying equipment such as light meters and flash attachments. All teachers of agriculture would do well to take a close look at what a 35mm can do for them in their teaching program. Its possibilities are numerous when properly used.

The 35mm film is customarily developed and mounted as 2 x 2 inch transparencies and, as such, their uses are many as a supplement to classroom lectures or laboratory work. One of the best methods of using these slides is to shoot a series of the same subject over a period of several months or, in some cases, years. As an example—a series of pictures of an improved pasture program could begin with the native pasture and move through the plowing, seeding, fertilizing, irrigation, and other operations involved in the establishment of the pasture. Seasonal shots would be necessary to depict growth, forage yields and utilization. A time series would also cover periods of unusual circumstances such as a drought or floods if such should occur. Other series subjects could include such activities as complete coverage of the construction of a farm pond, laying out terraces and their construction, detailed construction of a set of work pens, or the planning and planting of an orchard.

In order to accumulate a complete series of certain farm and ranch activities, such as an established improved pasture, several months and perhaps a few years would be required, but once completed, the slides will last for an indefinite period of time. Other projects, such as the marketing of some particular farm product could be completed in one or two days.

The extent to which this particular type of visual aid is used should be regulated, as is true of all teaching aids, by the individual teacher's circumstances and should serve only as a supplement to other sound teaching practices. It will add to one's teaching effectiveness, but will not serve as a substitute.

One very effective use of a slide series is to illustrate some particular subject or farm operation that circumstances, such as time or distance, would prevent the students from actually seeing in person. Another use is to stimulate interest in the students prior to a field trip where they will have an opportunity to see and perhaps participate in some particular farm or ranch function.

There are numerous makes of 35mm cameras on the market, and good quality pictures are within the ability of anyone because of the simplicity of operation of the latest models. All of the necessary equipment such as camera, flash and light meter can be purchased for as little as eighty dollars, or if better quality equipment is wanted, the sky is the limit. The cost of each slide will average about fourteen cents, depending upon the price paid for the film and its development.

Pictures taken by a teacher in his immediate area are in some instances more desirable and useful than those that are on loan from commercial companies because they pertain to local conditions and are usually more-up-to-date on certain subjects.

In several fields of study there are few or no suitable films or transparencies available and preparation of ones own slides will eliminate the common inconvenience of not having material available on the date scheduled.

No one disputes the value of pictures, especially a colored one, to emphasize a point or to bring about a greater retention of the subject matter by the viewer. Those teachers who are not acquainted with the possibilities of the 35mm camera would do well to take a close look at the advantages it offers in strengthening a teaching program.

Using The College Farm In Teaching Agriculture Classes

By Ed D. Moore,
Arkansas State College

The college farm serves well as a source of material for class or laboratory explanation or demonstration, but the farm functions best as a means of practical application or on-the-job training in methods or techniques discussed in the classroom.

Basic introductory agriculture and production courses with weekly scheduled laboratory periods should be designed to permit maximum use of farm facilities as teaching aids. The extent to which the college farm is used by agriculture classes depends on several factors. The relative importance of these factors will vary to some extent with each school, but will often be as follows:

1. The instructor of the class.
2. The administrative policy of the agriculture department and of the school.
3. Facilities such as land, buildings, equipment, and livestock.
4. Labor available.
5. Number of students.

The class instructor is the prime mover in using the college farm in teaching. He must weigh all factors and decide how they can best be fitted together to offer the most complete instruction to his students. The instructor from past experience will have knowledge of certain skills which the student should master in each course of study. He will also know production p r i n c i p l e s that should be stressed. There are also a number of different production methods used by farmers in any given area. These methods and questions, written to the department by adults who are not students, may be worthy of class discussion and laboratory study. By guiding the classroom discussion the instructor can usually motivate the class to the point that they will request further study or comparison of skills, methods, and results of some phase of an agricultural enterprise. Many method demonstrations will fit into the normal production cycle of a farm enterprise.

More time is needed to outline, supervise, and evaluate a class activity on the college farm than to prepare a lecture from textbooks for the classroom. Experienced educators realize that any instructor is limited in the number of students he can adequately supervise while they are doing practical work on the college farm. The efficiency of the supervision will probably begin to decrease for most instructors between five and ten students. Rather than limit the size of the classes, the use of advanced students as laboratory assistants will often provide desirable training for the students in class and for the advanced student as a future teacher.

The administrative policy of the agriculture department and of the school will establish the limits within which an instructor may use the college farm. Many educational farm enterprises will not be self-supporting if the produce from that enterprise must be sold on the open market. The administration should decide, after receiving the recommendations of the various instructors, the number and size of the farm enterprises that are to be used in class work. The administration should clearly define the limits of responsibility and authority between the educational or demonstrational enterprises, under the supervision of the instructor, and the other farm enterprises that may be under the supervision of non-instructional personnel. The administration should make immediate and impartial decisions in case of conflicting interest between two or more enterprises and insist on complete cooperation be-

tween all personnel after the administrative decisions are made. The instructors also have an obligation to cooperate with each other and carry on the maximum program possible within the established limits.

Facilities on the college farms for teaching classes vary greatly, and always will, but an enterprising instructor and an interested administration will not be long without facilities for needed instruction in agriculture classes. Land, buildings, equipment, and livestock may be either owned by the college or owned by interested individuals, companies, and organizations. Ownership is of little importance in most agricultural production methods, and facilities may be donated, loaned, rented, or leased and used satisfactorily in teaching. Publicity may aid in acquiring additional facilities for classwork.

The labor available to carry on the production and maintenance work of an enterprise between classes may limit the size of the operation. Excellent instructional results are obtained when the instructor explains and demonstrates a new skill, and then allows each student to repeat the performance until a satisfactory degree of skill is attained by the student. Once the skill is acquired by the student, little additional knowledge is gained by continued repetition and an educational process is in danger of becoming dull labor. For most effective learning the practical work requirement for each student should be relatively short, and should be a study of only one to four items at each laboratory period. There is no reason why a self-supporting enterprise should not employ adequate labor. However, an educational enterprise that does not support itself should be kept at the minimum size for proper instruction and may well use seasonal or part-time labor. In some instances an educational enterprise may be so closely related to the classwork that by careful arrangement of instructon no additional labor will be needed.

The number of students in any given class will vary slightly from year to year. In the advance planning for using the college farm in teaching agriculture classes, the maximum expected number should be considered. It is usually easier to scale an enterprise down and improve quality than to enlarge and maintain quality. Many production practices are seasonal and must be planned more than one year in advance of the scheduled class. The classroom discussion should explain the seasonal nature of these practices.

In this article the use of the college farm for class instruction has not included the use of the farm for research. Instead, this discussion has been limited to the usage of the farm at the freshman and sophomore class levels where most students do not have the background to do research but need to acquire basic skills and techniques. Research by more advanced students may well be handled as special problems and the college farm should be available for such activities.

The use of the college farm in teaching agriculture classes will require considerable initiative and effort from the instructor, but it is doubtful if any other phase of instruction will produce as capable and well trained college graduates.

Agriculture at Southwest Missouri State College

By Glenn E. Karls,
SW Missouri State College

In December, 1958, Southwest Missouri State's Agriculture Department moved into a new $350,000 building. In a way this date is the beginning of a new era in the teaching of agriculture at SMS. Since the formation of the Agriculture Department in July, 1947, the building facilities had been quite limited.

The new building is 180 feet long by 60 feet wide and has two floors. On the first floor is located the Dairy Laboratory which provides facilities for milk receiv-

ing, pasteurization, bottling, cheese making, and cooling.

The Poultry Laboratories are also on the first floor. A large candling room provides spacious tables for general laboratory and classroom work. Two 2,500 egg all-electric incubators have been installed in the incubator room. A large battery room for brooding is located adjacent to the candling room.

Located on the second floor are three general lecture rooms; an Agricultural Economics and a Landscape Gardening laboratory room; a Soils laboratory and Soils Testing laboratory; a field crops Entomology laboratory; an agriculture reading room; a seminar room; a reception room; secretary's office, and offices for each of the staff members.

Large store rooms are adjacent to each lecture or laboratory room. The soil testing laboratory contains one of the most modern soil testing units in the state and the people of Southwest Missouri are invited to have their soils analyzed in this laboratory.

The new greenhouse recently completed greatly improves the facilities for teaching Horticulture and Agronomy. The new, modern 700 square foot laboratory built in conjunction with the greenhouse provides the very latest equipment for student use with adequate storage areas. There is a 1500 square foot growing area under glass for classroom use and demonstration purposes.

The most popular degree for agriculture students is the BS degree with 60 hours of agriculture. This four year course qualifies graduates for employment in commercial agriculture, federal and state civil service, the management of various types of farms, agri-business, and many related occupations. The BS in Education degree with 30-45 hours agriculture major is desirable for those who wish to teach. Vocational agriculture teachers can secure two years training at Southwest Missouri State College before transferring to a teacher training institution. During the present year, forty-three different 2.5 hour courses in agriculture are being offered. Thus, a total of 107.5 hours of technical agriculture is available to agriculture students during the year 1959-60. Field work in agriculture gives agriculture majors opportunities of "on the job" training with college credit. Commercial companies cooperating with this phase may assist in the job placement of agriculture students who successfully complete these courses. It is believed that the state college at Springfield was the first college in the midwest to offer this type training in agriculture.

A thirty-passenger departmental bus furnishes ideal transportation for agriculture classes to make studies on the farms of the area. In addition, the agricultural plants of the area such as meat packing, egg and poultry processing, cheese manufacturing, stock yards, milling companies, nurseries, fertilizer companies, and implement companies provide excellent facilities for laboratory work in many agriculture classes.

Our NACTA Officers

Now that the time for our 1960 Conference approaches the Editor would like to tell the readers of the NACTA JOURNAL something about the three men who constitute the major officers of our organization. We are proud of these men, their accomplishments professionally, and the devotion they have exhibited to the NACTA.

PRESIDENT RALPH A. BENTON for several years served the NACTA most capably as its secretary-treasurer before being elevated to our "top office" at the 1959 meeting. He was reared on a Nebraska farm and received both his bachelor's and master's degrees from the University of Nebraska. Later, he was awarded his Ph.D degree by the University of Illinois. Professionally, his experience includes 13 years as a teacher of

vocational agriculture, two years service with the SCS and a period as extension poultryman at the University of Nebraska. For eight years Dr. Benton was associate professor of agricultural education at Illinois State Normal University, and since 1956 he has been located at Southern Illinois University, presently as head of the agricultural education department. His duties include those of academic advisor to students in the School of Agriculture and also teacher trainer in agricultural education.

ED D. MOORE, a native of Arkansas, is our vice president. A forward-looking member of the NACTA for a number of years, he currently is associate professor of Animal Husbandry at Arkansas State College. He received his BS degree in General Agriculture from the University of Arkansas in 1951 and in 1952 was awarded an MS in Animal Husbandry by that institution.

A veteran of World War II, Professor Moore has served as a GI Farm Training class teacher and an associate County Agricultural agent. He joined the agriculture staff at Arkansas State College in 1954. Among his non-classroom activities are: co-sponsor of Block and Bridle, also Agriculture Club; department representative in the college faculty council, and commanding officer in the Arkansas National Guard. He reports that he is happily married with a full house of two queens and three kings, i.e., wife, daughter and three sons!

W. CLYDE HYDER, our efficient secretary-treasurer, is a charter member of the NACTA and served previously as director for the Southern Region. His BS degree was granted by Tennessee Polytechnic Institute and his MS was earned at the University of Tennessee. Prior to entering military service Professor Hyder taught vocational agriculture at Christiana, Tennessee. The completion of four years duty with the armed forces found him with the rank as Captain. Presently, he is commanding officer of a local reserve unit.

Since 1946 Mr. Hyder has been a member of the agriculture staff at Tennessee Tech. He has done additional graduate study at Iowa State College and now heads the Animal Industry department at TPI. Currently, he serves as freshman advisor and sponsor of the Block and Bridle Club.

—o—

Veterinarians Contribute to College Course

By Warren S. Jacka
Wisconsin State College
and Institute of Technology

A valuable contribution to one of our college courses in Animal Science was brought about through the splendid cooperation of the practicing veterinarians of a seven county area in Southwestern Wisconsin.

This was made possible because the veterinarians of this seven county area have a well-organized, tightly knit organization, devoted to professional improvement, and having a high sense of community responsibility. This group holds monthly meetings and, at least once a year, a Veterinary Clinic is conducted, this usually being held at the College.

More than a year ago the president of the association, Dr. Richard Bristol, came to Dr. Nylin, the head of our department and said that his association wished to be of more service to the Agriculture Department of the College. He said that ten practicing veterinarians would be available for a lecture series during the second semester of 1958-59.

This offer seemed almost too good to be true. It seemed ideal to have these lectures presented during the regular class period of a two credit course taught by the writer, Veterinary Science 352. The series was arranged so that there was a lecture about every other week during the semester. The association took

full responsibility for notifying the speakers as to dates, and even had substitutes ready in case of an emergency. Such an emergency occurred but once, and then it was the veterinarian that had the emergency and not a farmer. A lady veterinarian, a member of a husband and wife team, was to address the class on "First Aid to Animals." However, the day of the lecture found her in the hospital giving birth to her fifth child. A capable male substitute carried on successfully.

The lecture series was as follows, with no particular reason for the sequence of subject matter.

(1) "Leptosprosis, Brucellosis, and Tuberculosis"
(2) "Swine Enteritis, Swine Cholera and Erysipelas"
(3) "Internal and External Parasites of Livestock"
(4) "Artificial Insemination"
(5) "Poisonous Plants"
(6) "Mastitis"
(7) "First Aid to Animals"
(8) "Ketosis and Milk Fever Complex"
(9) "Animal Restraint"
(10) "Diseases and Parasites of Poultry"

In preparing for this year's series some slight changes were made after evaluation of last year's lectures by students, instructor and the chairman of the Veterinarian's Committee. Some topics were combined or omitted with the result that eight lectures will be presented this year.

As one might expect, the reaction of the fifty seniors enrolled in the course was highly favorable and enthusiastic. A very popular feature of the lectures was a ten minute period for questions at the close. There were no nodding students at any time during the hour.

Some typical student comments were:

"I think that this plan had great value because it was practical. We get the understanding in regular class and learn more of the practical applications with the special lectures."

"This series was interesting and educational. These men know their subject matter. They mentioned many of the practical things that we should know."

"I think that this was a wonderful idea. I would like to hear more personal experiences of the veterinarians."

In evaluating this lecture series, we at the college consider these to be some of the most desirable results:

1. The valuable up-to-date factual material was presented in a well-organized manner and augmented by the practical experiences of the speakers.

2. A better understanding was obtained of the problems of the veterinarian and his work in the community. Our young men who go into rural communities as high school teachers of Agriculture, county extension agents, field men and similar positions know that they have a valuable ally in the well trained veterinarian.

3. Then, there is the matter of ethics and economics. Time and again it was brought out that the veterinarian prefers to perform only services that are of economic value to the farmer.

The veterinarians as a group, and individually, certainly gave more than they received. Yet they recognize their service here has been a venture in public relations. It was pointed out many times that the farmer waits too long before calling his veterinarian, and then expects miracles. Here is an area where the contacts with the farmer through the Agriculture teacher and his students can be most valuable.

For the future we foresee that changes in personnel and administration of the Veterinarians Association may affect the amount and kind of material presented to our classes. However, we have high hopes that this valuable series will become permanent.

Expanding Demand For Farm Products--- A Solution to the Farm Problem

By Raymond S. Trayer *

It used to be said, "Two things you can't escape: death and taxes." Now-a-days there is a third—the Farm Problem...

The Basic Issue

The biggest problem about the farm problem is that we persist in looking at it exclusively as a farm problem. Have we not shown a crying lack of insight and imagination? Haven't we talked about prices, income, surpluses, increasing demand, curtailing supply, "reverse homesteading", and other schemes, as though these were the basic issues? The basic issue facing farmers, all Americans, and mankind everywhere is SURVIVAL. Unless we work at this fundamental problem, rather than persist in trying to ignore it in the illusion that the military planners have the situation well in hand, we may wake up one morning to find that we didn't wake up. This would be the final solution to the farm problem and to all our problems.

The tragic dilemma of our time is that there is both ground for profound hope for a new and better life available to all while at the same time there are deep and searing apprehensions that we will fail to comprehend the changes possible and fashion an adequate policy. Man's contemporary battle for survival has taken on a new dimension. We are faced now, not alone with liquidation as individuals, but with extinction as a species. Man formerly was at the mercy of nature. Now he has learned to control nature, but also before he has learned to control himself. Ironically, man's greatest threat to survival now is man.

We have put our faith and resources in instruments that we dare not use, and then behave as though they will be used, while we neglect the use of instruments at our command that could convert man's plight to plenty.

Professor Theodore Schultz points out that some of our farm policies, especially those connected with philanthrophy, have been "bad economics". The strong implication being that if it is bad economics, which it may be, it is therefore bad from every standpoint, period. We fail to question, or not very loudly, the bad economics—the unproductiveness—of military stockpiling around the world at rates that would make farm surpluses look like anthills. Is it "bad economics" to underwrite the cultural and physical overhead that is required for a balanced world economic development?

Current ideas and attitudes in economics were worked out in a world far different from our own. The shortcomings of economics are not original error, but uncorrected obsolescence. Wealth, whether with individuals or nations, can become a relentless enemy of understanding what the real problem is. To a considerable extent, America's farm problem as one of surpluses, grows out of certain historical accidents which for most other countries made their farm problem one of shortages. China and India have one hundred million acres less arable land but eight times more people than the United States. Our responsibility and our opportunity is suggested by the fact that America produces 20% of the world's food (and consumes most of it herself), but has only 6% of the world's people. We live in our affluent world and do not understand what to do about it.

From Policy to Platform

Agricultural policy has lost its focus, its central purpose. It has become succotash, a Pandora's Box, from which almost anything can emerge. Historically and fundamentally, America's agricultural policy, wisely, has been a policy of plenty, of eluding poverty by producing more. Farmers are inherently producers, not restricters of production. Consumers are

intended to consume, they dislike food destruction and waste, even of surpluses. Our confusion comes from denying or forgetting what farming is for. The purpose of farming is to produce food, feed and fiber in abundance—in such abundance that we can release people, resources and energies for other pursuits. Astonished by our own achievement we are tempted to think that the objective must be changed.

To be more specific. Can we propose that to solve the farm problem by expanding demand will require a new kind of war—nothing less? An all-out attack is required, not over the Berlin crisis, not on the Comumnists, but an all-out attack on the roots of communism, viz., poverty, illiteracy, under-privilege. These roots would remain if all the Communists would conveniently commit suicide tonight. In other words we should attack the fundamental and persistent economic ills which most of mankind still face.

To do this is no easy task but neither was the conquering of a continent. It requires, however, much more than the fits and starts and grubstaking of foreign aid (so-called) that we've played around with in recent years. It must be put on a "war-waged-for-survival" basis. It means reallocation of resources on a large scale. The auto industry, for instance, may have to forego its new model a year, as it did from 1942-46. We might need rationing. We certainly would have more taxes, and have to buy Bonds, Bonds, Bonds (not "Saving Bonds") but Bonds to set up an instrument adequate to do the job. Such an instrument, for example, might be an international public corporation, a W. D. A., a World Development Authority ....which, arguing by analogy from our own successful TVA demonstration, would pull together and integrate the various technical aid and investment programs to tackle development on coordinated regional-country-wide bases rather than on our present piecemeal and expedient project-wise approach.

When we remember the logistics of men, materials and ingenuity assembled and expended to fight World War 2, we can see something of the magnitude of the undertaking that confronts us if we are serious about expanding demand—not alone for farm products of U. S. farmers —but expanding demand for the good life for all, everywhere.

We fought in World War 2 man's secondary enemies of fascism, nazism, rampant nationalism, bred by our failure to fight man's fundamental enemies. We reaped communism, a more subtle and more insidious version of the same doctrine. Now our myoptic focusing on military security daily makes us less secure. It may lead us to fight the wrong enemy again. Man's enemy is not his fellow man. Man has solved the problems nature sets, but not those he sets himself. He still has to learn to work with and not against his fellow men, arming them with science and machines to free the world from want. The crucial question is whether we will see this soon enough to fight and finish the right enemy.

Our agricultural policy must be basically a policy of plenty, tested by the standard, and geared to the program of income growth, stability, justice and freedom, at home and abroad.

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* Formerly a member of the NACTA while affiliated with Earlham College. Now head of Economic Research Institute, Chore Boy Manufacturing Company.

See You in Springfield

March 17-18-19

NACTA Chatter

ILLINOIS NORMAL UNIVERSITY will be back again this year in an attempt to repeat its 1959 victory in the NACTA Livestock and Dairy Cattle Judging contests. Its livestock judging teams won second and third places in the Maryville Missouri Invitational Meet with members of the second team "walking off" with individual honors. Dr. Hubert Brown coached these groups.

SOUTHWEST MISSOURI STATE COLLEGE'S agriculture department will host the 35th Annual SW Missouri FFA Contest on April 6-7. Seventy-four schools have been invited to participate with some 1500 FFA members competing in 14 different contests. The college Agriculture Club is the largest student organization on the campus and will play a prominent part in conducting the FFA contests.

WESTERN KENTUCKY STATE COLLEGE will offer some stiff competition to other NACTA schools entered in the oncoming judging events at Springfield. Missouri on March 18. Its dairy cattle judging team won first place in the Brown Swiss division at the late Mid-South Fair held in Memphis.

CENTRAL MISSOURI STATE COLLEGE has provided new quarters for its agriculture department and the agricultural classes are making good use of their new facilities. Two new majors are being offered at Central State—Agri-Business and Soil Conservation. The head of the department, Dr. L. B. Granger, is listed in the recent new edition of Who's Who in American Education.

BERRY SCHOOLS Department of Agriculture during the present year have added two new staff members in the persons of Thomas H. Joyner, assistant forester, and Ralph West, assistant project leader in swine production. The largest freshman class in recent years enrolled last fall. Two new farms, totaling 900 acres have been added to the College holdings. "No new babies, no resignations" is the news from D. R. Dodds, head of the department.

TENNESSEE TECH'S enrollment in agriculture took an upturn for the Winter Quarter and present indications are for a continuance of this trend. The newly organized General Agriculture department includes students majoring in agricultural science, agricultural economics, pre-forestry, horticulture and farm mechanics. Director W. J. Huddleston, has been elected Councilman for the Southeastern states by members of the Soil Conservation Society of America and Dr. E. B. Knight recently was named vice president of the newly installed local chapter of the American Association of University Professors.

FRIENDS UNIVERSITY is planning to enter its livestock and dairy cattle judging teams in the NACTA contest which will be held in connection with the 1960 Conference. Members of its animal husbandry, crops and soils classes recently attended a series of programs sponsored by the Agricultural Extension Service, and participated in the discussions conducted by specialists from Kansas State College.

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New Skills For New Agriculturists

By Roy Joe Stuckey,
Wilmington College

Agriculture is the science which deals with the production, processing, and distribution of food and fiber. It is one of the oldest and most basic of professions. Upon it rests the problem of world hunger and consequently much of the problem of world peace.

Our generation has witnessed its speed of travel increased by one-thousand fold. This represents the difference of speed between our fastest race horse and our fastest space rocket. The writer recently

engaged his nearly 90 year-old grandmother in conversation about farming as she knew it in the days of her girlhood in Illinois. Thinking that he would pay a compliment to her long experience, he said, "Grandmother, I bet you can remember pretty plainly the days of the horse and buggy!" and she replied, "Not only can I remember the horse and buggy but I can remember the day when the first buggy came to our county, because, you see, in the early days we only had a horse and wagon."

The technological revolution came to industry perhaps 75-100 years ago. It came to agriculture less than 2 decades ago. To equip a hired hand on a farm in 1920 required scarcely $15.00 worth of equipment: a shucking peg, a pitch fork, a scoop shovel, a saw, a hammer, a corn knife, a ditching spade, and an axe. Compare this with the present day behemoths that are now beginning to make their appearances on many farms across our great corn belt: nine bottom plows, 50-ton tractors; and 4-row self propelled, fully air conditioned corn pickers, costing $10,000-15,000 each. These are the contrasts that are familiar to anyone who opens his eyes and observes the new agriculture that is emerging all around us.

The great problem, low income, that seems constantly to plague agriculture and to keep it ever before the eyes of our nation can be summed up in one simple phrase FAILURE TO ADJUST TO TECHNOLOGY. This failure stems partially from our well intentioned desire to continue to maintain a vast number of small units in agricultural production. Thus, under the worthy banner to "preserving the family-type farm" we have tended to suppress the level of agricultural income for the efficient producer as well as the inefficient.

Following the tremendous technological advance of the past twenty years our nation now finds only about 8% of its population actually engaged in commercial agricultural production. Of much greater importance however, is the fact that the total agricultural economy including supply, processing, and distribution employs nearly 40% of our national labor force, while producing more than 40% of our gross national income.

It is, therefore, becoming ever more apparent that the wider areas of "Agri-Business" are offering more and more opportunities for profitable employment while the production area is offering fewer and fewer. As forward looking teachers we must continuously keep alert for new avenues in the field of agricultural occupations and fit our students for the many opportunities opening up to them.

GRANTS FOR RESEARCH

By L. C. Pearson,
Ricks College

During the Memphis meeting of the Executive Committee several of those present expressed an interest in learning more of the availability of grants for research projects such as might be conducted by schools belonging to the NACTA The writer was requested to do a little preliminary probing into the possibilities and sources of such financial aid with the idea that the topic would be further discussed at the March meeting of our Association. What has been learned is discussed this article.

The AAAS (American Association for the Advancement of Science) has a research program under operation for staff members of small colleges. To date the proposals approved all involve the preservice training of teachers of science or agriculture. Additional information may be obtained from Dr. John R. Mayor, Director of Education, AAAS, 1515 Massa-

chusetts Ave., NW, Washington 5, D. C.

For several years the National Science Foundation has been encouraging research by staff members of such schools as ours. The address of the National Science Foundation is 2101 Constitution Ave., NW, Washington 25, D. C.

During the past year colleges and universities in every state of the Union have been conducting research projects financed by the Federal Small Business Administration. These grants are limited to $40,000 per state and may be used for more than one project. At least one of our institutions, Tennessee Tech, is carrying on research, in an agricultural area, i.e., the practices and procedures of nurserymen engaged in the handling of ornamentals for landscaping. The dead line for 1960-1961 project approval is March 1 and anyone interested should immediately contact the Research Division, Small Business Administration, Washington 25, D. C.

No doubt grants from private business concerns are also available plus a number of other opportunities offered by foundations and like sources. The writer will be glad to assemble such information and make it available to members of the NACTA providing it is reported to him several weeks before the Springfield conference.